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**ENGLISH LANGUAGE TRANSLATION OF THE  
ANNEXES TO THE INTERNATIONAL PRELIMINARY  
EXAMINATION REPORT UNDER PCT ARTICLE 36**

(Amended Specification and Claims under Article 34)

Replacement Sheets for Claims

International Application No.: PCT/JP03/00593

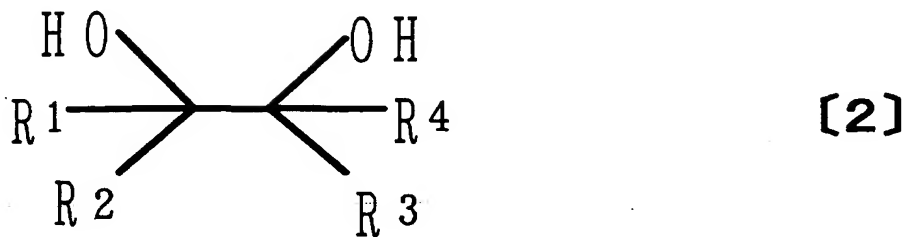
Applicant: Masato Tanaka et al.

Title: NOVEL PROCESS FOR PRODUCING 1,2-DIOL

Rader, Fishman & Grauer PLLC

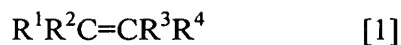
# CLAIMS

1. A method for producing a 1,2-diol compound represented by the general formula [2]:



wherein  $\text{R}^1$ ,  $\text{R}^2$ ,  $\text{R}^3$ , and  $\text{R}^4$  independently represent a hydrogen atom, a carboxyl group, a cyano group, a nitro group, a sulfonic acid group, an alkyl group which may have a substituent, a cycloalkyl group which may have a substituent, an aryl group which may have a substituent, an aralkyl group which may have a substituent, a heterocyclic group which may have a substituent, an alkoxy group which may have a substituent, an alkoxycarbonyl group which may have a substituent, an acyl group which may have a substituent, an amide group which may have a substituent, a silyl group which may have a substituent, a phosphoryl group which may have a substituent, a sulfinyl group which may have a substituent, a sulfonyl group which may have a substituent, or a sulfonate group which may have a substituent. Any two of  $\text{R}^1$ ,  $\text{R}^2$ ,  $\text{R}^3$ , and  $\text{R}^4$  may lose a hydrogen atom to be bonded together to form a ring with a carbon atom bonding to them, and any two of  $\text{R}^1$ ,  $\text{R}^2$ ,  $\text{R}^3$ , and  $\text{R}^4$  may lose a hydrogen atom and be bonded through a divalent atom and/or a divalent functional group to form a ring with a carbon atom bonding to them,

characterized by reacting an olefin compound represented by the general formula [1]:



wherein  $R^1$ ,  $R^2$ ,  $R^3$ , and  $R^4$  are as defined above,

with hydrogen peroxide in the presence of a polymer compound having a sulfonic acid group.

2. The method according to claim 1, wherein the hydrogen peroxide is in the form of an aqueous hydrogen peroxide solution.

3. The method according to claim 1 or 2, wherein the polymer compound having a sulfonic acid group is a styrene polymer with a side chain comprising a sulfonic acid group.

4. The method according to claim 1 or 2, wherein the polymer compound having a sulfonic acid group is a styrene-divinylbenzene copolymer with a side chain comprising a sulfonic acid group.

5. The method according to claim 1 or 2, wherein the polymer compound having a sulfonic acid group is a fluorocarbon resin with a side chain comprising a sulfonic acid group.